

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) In an access management system comprising an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, a method for defining a custom workflow for managing entity identities, the method comprising the steps of:

accessing, at the access management system, a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters define operations to be performed on identity profiles as part of said one or more custom workflows;

modifying the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

dynamically creating, at the identity system, a definition of a first custom workflow for managing an identity profile for at least one user, based on said modified template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters, **wherein said dynamically creating includes:**

determining a first set of possible data types for a particular action
based on said template,
reporting said first set of possible data types, and

**receiving an indication of a variable for said first workflow, wherein
one of said data types from said first set of possible data types is a variable supplied
by another workflow;** and

receiving a selection of a first data type for said variable; and
storing, the identity system, said definition of said first custom workflow at a
mass storage device.

2. (Original) A method according to claim 1, wherein:
said template includes a set of parameters for each action available to a workflow
type.

3. (Original) A method according to claim 1, wherein:
said template is an XML document.

4. (Original) A method according to claim 1, further comprising the
steps of:

adding data to said template after said step of storing;
creating a definition of a second workflow after said step of adding data; and
storing said definition of said second workflow.

5. (Original) A method according to claim 1, further comprising the step
of:

creating said template.

6. (Original) A method according to claim 5, wherein said step of
creating said template includes the steps of:

adding a set of workflow types to said template;
adding one or more actions for at least a subset of said workflow types; and
adding parameters for at least a subset of said actions.

7. (Original) A method according to claim 1, wherein:

said template applies to only one application.

8 (Original) A method according to claim 1, wherein:
said template includes parameters for creating objects, deleting objects and
changing attributes.

9. (Original) A method according to claim 1, wherein:
said template includes parameters for self registration.

10. (Original) A method according to claim 1, wherein:
said template includes a parameter indicating whether supplied variables can be
used in said step of creating.

11. (Original) A method according to claim 1, wherein:
said template includes a parameter indicating whether additional workflows can
be used to supply data.

12. (Original) A method according to claim 11, wherein:
said additional workflows includes multiple levels of nesting of workflows.

13. (Canceled)

14. (Original) A method according to claim 1, wherein said step of
creating includes the step of:

accessing one or more parameters in said template;
offering a set of options based on said accessed parameters; and
receiving a selection of one or more of said offered options.

15. (Original) A method according to claim 1, wherein said step of
creating includes the steps of:

determining a first set of possible actions for a particular step based on said
template;

reporting said first set of possible actions; and
receiving a selection of a first action of said first set of possible actions.

16. - 17. (Canceled)

18. (Original) A method according to claim 1, wherein said step of creating includes the steps of:
determining whether pre actions are available for a particular action based on said template;
reporting whether pre actions are available for said particular action; and
receiving a selection of whether to add pre actions to said definition of said first workflow for said particular action.

19. (Original) A method according to claim 1, wherein said step of creating includes the steps of:
determining a first set of possible entry conditions for a particular action based on said template;
reporting said a first set of possible entry conditions;
receiving a selection of a first entry condition of said first set of possible entry conditions;
determining and reporting whether said first entry condition is associated with a sub-workflow; and
receiving an indication whether said first workflow should wait for said sub-workflow.

20. (Original) A method according to claim 1, wherein said step of creating includes the steps of:
determining a first set of possible actions for a particular step based on said template;
reporting said first set of possible actions;

receiving a selection of a first action of said first set of possible actions;
determining a first set of possible data types for said first action based on said template;
reporting said first set of possible data types;
receiving an indication of a variable for said first workflow;
receiving a selection of a first data type for said variable;
determining whether pre or post actions are available for said first action based on said template;
reporting whether pre or post actions are available for said first action;
receiving a selection of whether to add pre or post actions to said definition of said first workflow for said first action;
determining a first set of possible entry conditions for said first action based on said template;
reporting said a first set of possible entry conditions;
receiving a selection of a first entry condition of said a first set of possible entry conditions;
determining and reporting whether said first entry condition is associated with a sub-workflow; and
receiving an indication whether said first workflow should wait for said sub-workflow.

21. (Original) A method according to claim 1, wherein said step of creating includes the steps of:
accessing one or more parameters in said template;
offering a set of options in a graphical user interface based on said accessed parameters; and
receiving a selection of one or more of said offered options using said graphical user interface.

22. (Currently Amended) One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code comprising software executable by an access management system comprising an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, the set of instructions comprising:

instructions for the access management system to access a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters comprise one or more parameters that define an operation to be performed on identity profiles as part of said one or more custom workflows;

instructions for the identity system to modify the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

instructions for the identity system to dynamically create a definition of a first custom workflow for managing an identity profile for at least one user, based on said template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters, **and wherein said instructions to dynamically create said definition comprise:**

instructions to determine a first set of possible entry conditions for a particular action based on said template,

instructions to report said first set of possible entry conditions;

instructions to receive a selection of a first entry condition of said first set of possible entry conditions,

instructions to determine and reporting whether said first entry condition is associated with a sub-workflow, and

instructions to receive an indication whether said first workflow should wait for said sub-workflow; and

instructions for the identity system to store said definition of said first custom workflow at a mass storage device.

23. (Previously Presented) One or more processor readable storage devices according to claim 22, wherein said set of instructions further comprises:
instructions to add data to said template after said step of storing;
instructions to create a definition of a second workflow after said step of adding data; and
instructions to store said definition of said second workflow.

24. (Previously Presented) One or more processor readable storage devices according to claim 22, wherein said set of instructions further comprises instructions to create said template, said instructions to create said template comprising:
instructions to add a set of workflow types to said template;
instructions to add one or more actions for at least a subset of said workflow types; and
instructions to add one or more parameters for at least a subset of said actions.

25. (Original) One or more processor readable storage devices according to claim 22, wherein:
said template includes parameters for self registration.

26. (Original) One or more processor readable storage devices according to claim 22, wherein:
said template includes a parameter indicating whether additional workflows can be used to supply data.

27. (Original) One or more processor readable storage devices according to claim 26, wherein:
said additional workflows includes multiple levels of nesting of workflows.

28. (Canceled)

29. (Previously Presented) One or more processor readable storage devices according to claim 22, wherein said instructions to create said definition comprise:
instructions to access one or more parameters in said template;
instructions to offer a set of options in a graphical user interface based on said accessed parameters; and
instructions to receive a selection of one or more of said offered options using said graphical user interface.

30. (Previously Presented) One or more processor readable storage devices according to claim 22, wherein said wherein said instructions to create said definition comprise:
instructions to determine a first set of possible actions for a particular step based on said template;
instructions to report said first set of possible actions; and
instructions to receive a selection of a first action of said first set of possible actions.

31. (Previously Presented) One or more processor readable storage devices according to claim 22, wherein said instructions to create said definition comprise:
instructions to determine a first set of possible data types for a particular action based on said template;
instructions to report said first set of possible data types;
instructions to receive an indication of a variable for said first workflow; and
instructions to receive a selection of a first data type of said variable, said first data type is a variable supplied by another workflow.

32. (Canceled)

33. (Currently Amended) An access management system having an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, the access management system comprising:

a communication interface; and

one or more processors in communication with said communication interface; and

a computer readable medium having embodied thereon a set of instructions

executable by the one or more processors, the set of instructions comprising:

instructions for the access management system to access a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters define operations to be performed on identity profiles as part of said one or more custom workflows;

instructions for the access management system to modify the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

instructions for the identity system to dynamically create a definition of a first custom workflow for managing an identity profile for at least one user, based on said template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters, wherein said instructions to dynamically create said definition comprise:

instructions to determine a first set of possible entry conditions
for a particular action based on said template,

instructions to report said a first set of possible entry
conditions,

instructions to receive a selection of a first entry condition of
said first set of possible entry conditions,

**instructions to determine and reporting whether said first
entry condition is associated with a sub-workflow, and
instructions to receive an indication whether said first
workflow should wait for said sub-workflow; and**

instructions for the identity system to store said definition of said first custom workflow at a mass storage device.

34. (Previously Presented) An access management system according to claim 33, wherein:

said template includes a parameter indicating whether additional workflows can be used to supply data, said additional workflows includes multiple levels of nesting of workflows.

35. (Canceled)

36. (Previously Presented) An access management system according to claim 33, wherein said instructions to create said definition comprise:

instructions to access one or more parameters in said template;

instructions to offer a set of options in a graphical user interface based on said accessed parameters; and

instructions to receive a selection of one or more of said offered options using said graphical user interface.

37. (Currently Amended) An access management system according to claim 33, wherein said instructions to create said definition comprise:

instructions to determine a first set of possible actions for a particular step based on said template;

instructions to report said a first set of possible actions; and

instructions to receive a selection of a first action of said a first set of possible actions.

38. (Previously Presented) An access management system according to claim 33, wherein said instructions to create said definition comprise:

instructions to determine a first set of possible data types for a particular action based on said template;

instructions to report said first set of possible data types;

instructions to receive an indication of a variable for said first workflow; and

instructions to receive a selection of a first data type of said variable, said first data type is a variable supplied by another workflow.

39. - 40. (Canceled)

41. (Previously Presented) A method according to claim 1, wherein the at least one entity is selected from among the group consisting of at least one user, at least one group and at least one organization.

42. - 44. (Canceled)

45. (Currently Amended) A method according to claim[[43]] 1, wherein performing the one of the one or more actions comprises:

the client program composing an extended markup language (“XML”) document comprising a request for the one of the one or more actions;

the client program transmitting the XML document for reception by an application;

the application performing the one of the one or more actions;

the application transmitting a second XML document for reception by the client program, the second XML document comprising an output message.

46. (Previously Presented) A method according to claim 45, wherein the client program communicates with the application using the simple object access protocol (“SOAP”).

47. (New) In an access management system comprising an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, a method for defining a custom workflow for managing entity identities, the method comprising the steps of:

accessing, at the access management system, a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters define operations to be performed on identity profiles as part of said one or more custom workflows;

modifying the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

dynamically creating, at the identity system, a definition of a first custom workflow for managing an identity profile for at least one user, based on said modified template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters, wherein said dynamically creating includes:

determining a first set of possible entry conditions for a particular action based on said template,

reporting said a first set of possible entry conditions;

receiving a selection of a first entry condition of said first set of possible entry conditions,

determining and reporting whether said first entry condition is associated with a sub-workflow, and

receiving an indication whether said first workflow should wait for said sub-workflow; and

storing, the identity system, said definition of said first custom workflow at a mass storage device.

48. (New) In an access management system comprising an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, a method for defining a custom workflow for managing entity identities, the method comprising the steps of:

accessing, at the access management system, a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters define operations to be performed on identity profiles as part of said one or more custom workflows;

modifying the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

dynamically creating, at the identity system, a definition of a first custom workflow for managing an identity profile for at least one user, based on said modified template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters, wherein said creating includes:

determining a first set of possible actions for a particular step based on said template,
reporting said first set of possible actions,
receiving a selection of a first action of said first set of possible actions,
determining a first set of possible data types for said first action based on said template,
reporting said first set of possible data types,
receiving an indication of a variable for said first workflow,

receiving a selection of a first data type for said variable,
determining whether pre or post actions are available for said first action
based on said template,
reporting whether pre or post actions are available for said first action,
receiving a selection of whether to add pre or post actions to said
definition of said first workflow for said first action,
determining a first set of possible entry conditions for said first action
based on said template,
reporting said a first set of possible entry conditions,
receiving a selection of a first entry condition of said a first set of possible
entry conditions,
determining and reporting whether said first entry condition is associated
with a sub-workflow; and
receiving an indication whether said first workflow should wait for said
sub-workflow; and
storing, the identity system, said definition of said first custom workflow at a
mass storage device.

49. (New) In an access management system comprising an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, a method for defining a custom workflow for managing entity identities, the method comprising the steps of:

accessing, at the access management system, a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters define operations to be performed on identity profiles as part of said one or more custom workflows;

modifying the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of

scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

dynamically creating, at the identity system, a definition of a first custom workflow for managing an identity profile for at least one user, based on said modified template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters; and

storing, the identity system, said definition of said first custom workflow at a mass storage device, wherein said workflow performs a task selected from the group consisting of: creating a user, deleting a user, subscribing a user to a group, enrolling a certificate, renewing a certificate, revoking a certificate, and changing a user attribute.

50. (New) In an access management system comprising an identity system for managing identity profiles and an access system for providing security of resources across one or more web servers, a method for defining a custom workflow for managing entity identities, the method comprising the steps of:

accessing, at the access management system, a template that indicates one or more parameters for defining one or more custom workflows for managing identity profiles, wherein said one or more parameters define operations to be performed on identity profiles as part of said one or more custom workflows;

modifying the template by receiving input configured to define workflow customization options, wherein the modifying of the template is accomplished without the use of scripts by allowing a user to select and/or modify the workflow customization options which are presented to the user in a graphical user interface;

dynamically creating, at the identity system, a definition of a first custom workflow for managing an identity profile for at least one user, based on said modified template, wherein said identity profile is used by said access management system to control access by said at least one user to said resources across one or more web servers, wherein the first custom

workflow is configured to automate the process of managing the identity profile by executing the operation defined by one or more custom workflow parameters;

storing, the identity system, said definition of said first custom workflow at a mass storage device;

invoking the workflow by a workflow engine, wherein the workflow comprises a set of actions comprising one or more actions;

performing one of the one or more actions by a client program;

passing, by the workflow engine, to the client program a callback handle uniform request locator (callback URL);

pausing the workflow by the workflow engine;

upon completion of the one or more actions, invoking, by the client program, the callback URL; and

upon an invocation of the callback URL, restarting, by the workflow engine, the workflow.